

CLAIMS

1. A method for using a handheld apparatus having one or more output devices including a rasterized visual display that present output to an operator, one or more input devices including an array of switches that receive input from the operator, a wireless transmitter, and processing circuitry that controls operation of the one or more output devices, the one or more input devices and the wireless transmitter, wherein the method comprises steps that perform the acts of:

10 presenting information through the rasterized visual display to the operator that assists the operator in controlling the operation of the handheld apparatus;

15 providing through the one or more output devices to the operator a presentation of a representation of first content;

20 receiving through the one or more input devices from the operator a second content that overlaps in time the presentation of first content according to a temporal relationship controlled by the operator and an identification of one or more recipients; and

25 sending through the wireless transmitter a representation of the second content and identification of one or more recipients to a remote server that is separated in space from the handheld apparatus, and causing the remote server to send to the one or more recipients a message representing the first content and the second content arranged according to the temporal relationship.

2. The method of claim 1 that comprises receiving by wireless communication a first signal that conveys the representation of first content.

25 3. The method of claim 2 wherein the first signal conveys a bandwidth-compressed representation of the first content and the method comprises expanding the bandwidth-compressed representation.

30 4. The method of claim 2 wherein the first signal conveys an adaptive bandwidth-compressed representation of the first content having a bandwidth requirement that

changes in response to characteristics of the representation of second content sent by the handheld apparatus and the method comprises expanding the adaptive bandwidth-compressed representation.

5 5. The method of claim 1 wherein the first content comprises music and the second content comprises vocal sounds received from the operator.

10 6. The method of claim 1 that comprises presenting sounds to the operator through the one or more output devices in response to actuation of the array of switches, wherein the second content comprises indications of the actuation of the array of switches by the operator.

15 7. The method of claim 6 that comprises adapting the sound generated in response to the activation of a particular switch within the array of switches according to characteristics of the first content.

20 8. The method of claim 6 that comprises adaptively enabling and disabling the handheld device to generate Dual Tone Multiple Frequency (DTMF) signals in response to the activation of the array of switches.

9. The method of claim 1 that comprises causing the remote server to add third content to the message, wherein the third content is controlled by the operator.

10. A system for generating a message, wherein the system comprises:

25 (a) a handheld apparatus having one or more output devices including a rasterized visual display that present output to an operator, one or more input devices including an array of switches that receive input from the operator, a first wireless transmitter, and processing circuitry that causes the handheld apparatus to:

5 (1) present information to the operator through the rasterized visual display that assists the operator in controlling the operation of the handheld apparatus;

10 (2) provide to the operator through the one or more output devices a presentation of first content;

15 (3) receive from the operator through the one or more input devices one or more signals representing second content that overlaps in time with the presentation of the first content according to a temporal relationship controlled by the operator and an identification of one or more recipients; and

20 (4) send through the first wireless transmitter a representation of the second content and identification of one or more recipients; and

25 (b) a server subsystem having a wireless receiver, one or more storage devices, and processing circuitry that causes the server subsystem to:

11 (1) receive through the wireless receiver and store by the one or more storage devices the representation of second content and identification of the one or more recipients, and

12 (2) send to the one or more recipients a message representing the first content and the second content arranged according to the temporal relationship.

13. The system of claim 10 wherein the server subsystem comprises a second wireless transmitter and the processing circuitry in the server subsystem causes the server subsystem to send through the second wireless transmitter to the handheld apparatus a first signal that conveys the representation of first content.

14. The system of claim 11 wherein the first signal conveys a bandwidth-compressed representation of the first content.

15. The system of claim 11 wherein the processing circuitry in the server subsystem causes the server subsystem to change bandwidth requirements of the first

signal in response to characteristics of the representation of second content received from the handheld apparatus.

14. The system of claim 10 wherein the first content comprises music and the

5 second content comprises vocal sounds received from the operator.

15. The system of claim 10 wherein the second content comprises indications of actuation of the array of switches by the operator, and the processing circuitry in the handheld device causes the handheld device to present sounds to the operator through the 10 one or more output devices in response to the actuation of the array of switches.

16. The system of claim 15 wherein the processing circuitry in the handheld device causes the handheld device to adapt the sound generated in response to the activation of a particular switch within the array of switches according to characteristics 15 of the first content.

17. The system of claim 15 wherein the processing circuitry in the handheld device enables and disables the handheld device to generate Dual Tone Multiple Frequency (DTMF) signals in response to the activation of the array of switches.

20 18. The system of claim 10 wherein the processing circuitry in the server subsystem causes the server subsystem to add third content to the message in response to information received from the handheld apparatus.

25 19. A server system having a wireless receiver, one or more storage devices, and processing circuitry that causes the server system to:

(a) receive through the wireless receiver one or more signals from a handheld apparatus that are generated under control of an operator of the handheld apparatus, wherein the one or more signals convey

30 (i) an identification of first content,

(ii) second content that overlaps in time with a presentation by the handheld apparatus of the first content, wherein the overlap is according to a temporal relationship that is controlled by the operator, and

(iii) an identification of one or more recipients;

5 (b) obtain information that identifies the temporal relationship; and

(c) send to the one or more recipients a message that represents the first content and the second content arranged according to the temporal relationship.

20. The system of claim 19 wherein the server system comprises a wireless transmitter and the processing circuitry in the server system causes the server system to send through the wireless transmitter to the handheld apparatus a first signal that conveys the representation of first content.

10 15 21. The system of claim 20 wherein the first signal conveys a bandwidth-compressed representation of the first content.

20 22. The system of claim 20 wherein the processing circuitry in the server system causes the server subsystem to change bandwidth requirements of the first signal in response to characteristics of the representation of second content received from the handheld apparatus.

23. The system of claim 19 wherein the first content comprises music and the second content comprises vocal sounds received from the operator.

25 24. The system of claim 19 wherein the first content comprises music and the second content represents actuation of an array of switches in the handheld apparatus by the operator.

30 25. The system of claim 19 wherein the remote server adds third content to the message in response to information received from the handheld apparatus.

26. A medium readable by a machine embodying a program of instructions for execution by one or more machines to perform a method for using a handheld apparatus having one or more output devices including a rasterized visual display that present output to an operator, one or more input devices including an array of switches that receive input from the operator, a wireless transmitter, and processing circuitry that controls operation of the one or more output devices, the one or more input devices and the wireless transmitter, wherein the method comprises steps that perform the acts of:

5 presenting information through the rasterized visual display to the operator that assists the operator in controlling the operation of the handheld apparatus;

10 providing through the one or more output devices to the operator a presentation of a representation of first content;

15 receiving through the one or more input devices from the operator a second content that overlaps in time the presentation of first content according to a temporal relationship controlled by the operator and an identification of one or more recipients; and

20 sending through the wireless transmitter a representation of the second content and identification of one or more recipients to a remote server that is separated in space from the handheld apparatus, and causing the remote server to send to the one or more recipients a message representing the first content and the second content arranged according to the temporal relationship.

27. The medium of claim 26 that comprises receiving by wireless communication a first signal that conveys the representation of first content.

25 28. The medium of claim 27 wherein the first signal conveys a bandwidth-compressed representation of the first content and the method comprises expanding the bandwidth-compressed representation.

30 29. The medium of claim 27 wherein the first signal conveys an adaptive bandwidth-compressed representation of the first content having a bandwidth requirement that changes in response to characteristics of the representation of second

content sent by the handheld apparatus and the method comprises expanding the adaptive bandwidth-compressed representation.

30. The medium of claim 26 wherein the first content comprises music and the
5 second content comprises vocal sounds received from the operator.

31. The medium of claim 26 that comprises presenting sounds to the operator
through the one or more output devices in response to actuation of the array of switches,
wherein the second content comprises indications of the actuation of the array of switches
10 by the operator.

32. The medium of claim 31 that comprises adapting the sound generated in
response to the activation of a particular switch within the array of switches according to
characteristics of the first content.

15 33. The medium of claim 31 that comprises adaptively enabling and disabling the
handheld device to generate Dual Tone Multiple Frequency (DTMF) signals in response
to the activation of the array of switches.

20 34. The medium of claim 26 that comprises causing the remote server to add
third content to the message, wherein the third content is controlled by the operator.